

REMARKS/ARGUMENT

The Office Action of March 28, 2008 has been reviewed and the comments therein were carefully considered. The present application includes claims 1-22. Claims 1-22 have been rejected by the Examiner.

REJECTIONS UNDER 35 USC § 103(a)

Claims 1, 3, 5-8, 11, 13-17 and 19, have been rejected under 35 U.S.C. 103(a) as being unpatentable over McCabe et al. (U.S. Patent No. 5,868,676) in view of Goto. (U.S. Patent No. 5,832,323). Claims 1, 7, and 13 are independent claims. The Applicant traverses this rejection for at least the following reasons.

CLAIMS 1-6

With respect to claim 1, McCabe relates a system and method to input a variable to calculate maximum velocity in an ultrasound system. A user interface may be used to alter the input used in the calculation of the maximum velocity. A trackball may be used to select the input P in the calculation of the maximum velocity. (McCabe, col. 8, lns 1-10.)

Thus, the system of McCabe may include a trackball, but that trackball is simply used to adjust input P to the maximum velocity processor, rather than to control functionality of the imaging system. (See McCabe, col. 7, lns. 36-40, 59-67.) In McCabe, this input is used to calculate the maximum velocity. In McCabe, the trackball is used to modify an input and not transmitting a command to the display imaging system as in claim 1. Further, as noted by the Examiner, McCabe does not disclose that the trackball generates a command through rotational translation of the trackball motion.

Goto relates to an information setting apparatus for setting the contents of mode of operation such as the photometric, exposure, or distance measurement of a camera. (See Goto,

col. 1, lns. 6-9.) Goto does not relate to a medical diagnostic imaging system. Furthermore, Goto does not teach or suggest use in a medical diagnostic imaging system environment. Rather, Goto discusses setting information of a camera. (Id.) Goto fails to disclose the control recited in the presently presented claims. That is, rotational movement of the trackball in Goto simply moves an information setting in the camera to present information such as exposure mode selections. (See Goto, col. 18, lns. 61-67, col. 19, lns. 1-12.) In order to make a mode selection confirmation, Goto requires that the ball must be depressed to engage a switch. (See Goto, col. 19, lns. 13-22.)

As described above, horizontal rotation of the ball 110 allows a change in mode selection segments (151, 152, and 153), vertical rotation of the ball 110 allows a change in detailed contents of the selected mode, and depression of the ball 110 allows confirmation or resetting. All these operations can be performed with only the thumb 107 of the right hand.

Goto, col. 19, lns. 59-65 (emphasis added).

Further, as with shutter time, in Goto, the user must depress the shutter button to confirm a setting (See Goto, col.19, lns. 34-37.) In Goto, the trackball produces horizontal and vertical coordinate or displacement information in response to the rotational movement of the trackball and the trackball must be depressed to confirm a setting.

A depression detection unit detects the presence/absence of depression in the third direction in accordance with this ON/OFF operation signal and forms a depression signal. The CPU 137 confirms setting information and resets the set information in accordance with the formed depression signal.

Goto, col. 18, lns. 4-9.

This horizontal and vertical coordinate information is used to adjust the settings, rather than trigger other functions to control the machine by virtue of the trackball motion. Activation of functions and/or other control caused by depressing the trackball direction is clearly distinct from the rotational trackball motion as recited in claim 1 of the present application. In contrast

to Goto, claim 1 recites generating a command through the rotational translation of the trackball motion and executing that command at a medical diagnostic imaging system.

Thus, for at least these reasons, Applicant submits that neither McCabe nor Goto, taken alone or in theoretical combination, teaches or reasonably suggests all the limitations of claim 1. Claims 2-6 are dependent claims which ultimately depend from independent claim 1 and should be allowable at least for the reasons stated.

CLAIMS 7-12

As discussed above, the system of McCabe may include a trackball, but that trackball is simply used to adjust input P to the maximum velocity processor, rather than to control functionality of the imaging system. (See McCabe, col. 7, lns. 36-40, 59-67.) In McCabe, this input is used to calculate the maximum velocity. In McCabe, the trackball is used to modify an input and not transmit a command to the display imaging system as in claim 1. Further, as noted by the Office Action, McCabe does not disclose that the trackball controls the imaging system based on rotational motion of the trackball.

Claim 7 recites a trackball that controls a diagnostic imaging system is based on the rotational movement of the trackball. Further, claim 7 recites that the handheld trackball device comprises a transmitter for transmitting a command to a diagnostic imaging system based on rotational motion of the trackball. As discussed above, Goto does not disclose a trackball for controlling a display imaging system based on the rotational movement of the trackball. Further, Goto does not disclose a transmitter for transmitting a command to the diagnostic imaging system based on rotational based on the rotational movement of the trackball. The Office Action's alleged support for disclosing a transmitter (356 in fig 23) does not disclose a transmitter. In fact, 356 in Goto is an interface circuit and not a transmitter. (See Goto, col. 28,

lns. 44-39-45.). Goto discloses that the trackball simply adjusts settings and these settings are confirmed by depression of the trackball. (See Goto, col. 18, lns. 4-9.)

Thus, for at least these reasons, the Applicant submits that neither McCabe nor Goto, taken alone or in theoretical combination, teaches or reasonably suggests all the limitations of claim 7. Claims 8-12 are dependent claims which ultimately depend from independent claim 7 and should be allowable at least for the reasons stated.

CLAIMS 13-22

As presented above, the system of McCabe may include a trackball, but that trackball is simply used to adjust input P to the maximum velocity processor, rather than to control functionality of the imaging system. (See McCabe, col. 7, lns. 36-40, 59-67.) In McCabe, this input is used to calculate the maximum velocity. In McCabe, the trackball is used to modify an input and not transmitting a command to the display imaging system as claimed in claim 1. Further, McCabe does not disclose a transmitter for transmitting a command to the medical diagnostic imaging system. The Office Action's alleged support (col. 8, lns. 1-10) discloses that a block 61 inputs information for calculation of a maximum velocity and does not disclose a transmitter for transmitting a command as in claim 1.

With regard to Goto, as discussed above, Goto does not disclose a remote mousing device for operating a medical diagnostic imaging system based on rotation movement of the moveable portion as recited in claim 13. The trackball disclosed in Goto is not a remote mousing device. In Goto, the trackball is integral to the camera and located on the back of the camera. (See Goto, col. 17, lns. 12-17.) Further, Goto does not disclose a transmitter for transmitting a command to the diagnostic imaging system based on rotational based on the rotational movement of the moveable portion, the command generated through translation of the rotational motion of the

moveable portion for execution at the medical diagnostic imaging system. The Office Action's alleged support for disclosing a transmitter (356 in fig 23) does not disclose a transmitter. In fact, 356 in Goto is an interface circuit and not a transmitter. (See Goto, col. 28, lns. 44-39-45.) Thus, for at least these reasons, the Applicant submits that neither McCabe nor Goto, taken alone or in theoretical combination, teaches or reasonably suggests all the limitations of claim 13. Claims 14-22 are dependent claims which ultimately depend from independent claim 13 and should be allowable at least for the reasons stated.

CLAIMS 2, 12, AND 18

Claims 2, 12, and 18 have been rejected under 35 U.S.C. 103(a) as being unpatentable over McCabe et al. (U.S. Patent No. 5,868,676) in view of Goto (U.S. Patent No. 5,832,323) and in further review of Gaughan et al. (U.S. Patent No. 5,589, 893).

As discussed above, neither McCabe nor Goto, alone or in combination, teaches or reasonably suggests the limitations of independent claims 1, 7 or 13 from which claims 2, 12 and 18 ultimately depend. Additionally, as noted by the Office Action, neither McCabe nor Goto disclose the added limitations of claims 2, 12, and 18.

Gaughan does nothing to cure the fundamental defects of McCabe and Goto with respect to the previously claimed features. Gaughan has no disclosure of a medical diagnostic imaging system or control of a system through trackball movement to help fill the gaps in McCabe and Goto. Therefore, Applicant respectfully submits that claims 2, 12, and 18 are allowable for at least the reasons stated above.

CLAIMS 4 AND 10

Claims 14 and 10 have been rejected under 35 U.S.C. 103(a) as being unpatentable over McCabe et al. (U.S. Patent No. 5,868,676) in view of Goto (U.S. Patent No. 5,832,323) and in further view of Chang (U.S. Patent No. 5,298,919).

As discussed above, neither McCabe nor Goto, alone or in combination, teaches or reasonably suggests the limitations of claims 1 and 7 from which claims 4 and 10 ultimately depend. Additionally, as noted by the Office Action, neither McCabe nor Goto disclose the added limitations of claims 4 and 10.

While Chang discloses a computer mouse, Chang does not disclose or envision the particular arrangement claimed in claims 4 and 10. Chang does nothing to cure the fundamental defects of McCabe and Goto with respect to the previously claimed features. Chang has no disclosure of a medical diagnostic imaging system or control of a system through trackball movement to help fill the gaps in McCabe and Goto. Therefore, Applicant respectfully submits that claim 4 is allowable for at least the reasons stated above.

CLAIMS 9 AND 21-22

Claims 9 and 21-22 have been rejected under 35 U.S.C. 103(a) as being unpatentable over McCabe et al. (U.S. Patent No. 5,868,676) in view of Goto (U.S. Patent No. 5,832,323) and further in view of Funda et al. (US Patent No. 5,417,210). The Applicant respectfully traverses this rejection for at least the following reasons.

As discussed above, neither McCabe nor Goto, alone or in combination, teaches or reasonably suggests the limitations of claims 7 or 13 from which claims 9 and 21-22 ultimately depend. Additionally, as noted by the Office Action, with respect to claim 9, neither McCabe nor Goto discloses the added limitations of claim 9.

Funda discloses a voice recognition system, but in Funda, unlike the feature claimed in claim 9, the speech recognition system is separate from the other input devices. (See Funda, col. 6, lns. 60-67; col. 7, lns. 1-4.)

Funda does nothing to cure the fundamental defects of McCabe and Goto with respect to the previously claimed features. Funda has no disclosure of a medical diagnostic imaging system or control of a system through trackball movement to help fill the gaps in McCabe and Goto. Therefore, Applicant respectfully submits that claim 9 is allowable for at least the reasons stated above.

With respect to claims 21-22, as noted by the Office Action, with respect to claims 21-22, neither McCabe or Goto disclose the added limitations of claims 21-22. Funda does not cure the fundamental defects of McCabe or Goto. In Funda, the trackball is simply used to move the cursor on the screen rather than to control functionality on the screen. Funda has no disclosure of a medical diagnostic imaging system or control of a system through trackball movement to help fill the gaps in McCabe and Goto. Therefore, Applicant respectfully submits that claims 21-22 are allowable for at least the reasons stated above.

Claim 20

Claim 20 has been rejected under 35 U.S.C. 103(a) as being unpatentable over McCabe et al. (U.S. Patent No. 5,868,676) in view of Goto (U.S. Patent No. 5,832,323) and further in view of Holmes (US 6,222,526). The Applicant respectfully traverses this rejection for at least the following reasons.

As discussed above, neither McCabe nor Goto alone or in combination, teaches or reasonably suggests the limitations of independent claim 13, from which claim 20 depends.

Additionally, as noted by the Examiner, neither McCabe nor Goto discloses the added limitation of claim 20.

Holmes bears no relation to a medical diagnostic imaging system but instead discusses a hand held ergonomic computer controller. See, e.g., Abstract. While Holmes discloses a trackball mounted in its particular hand held ergonomic computer controller, Holmes does not provide or disclose remedy the many defects found in McCabe and Goto with respect to independent claim 13 and dependent claim 20, including rotational translation of trackball movement into a command for execution at the medical diagnostic imaging system. Therefore, the Applicant respectfully submits that claim 20 is allowable for at least the reasons stated above.

Therefore, the Applicant respectfully submits that the rejections in the non final Office Action have been overcome, and the claims should be allowed over the cited art of record.

CONCLUSION

In general, the Office Action makes various statements regarding the pending claims and the cited references that are now moot in light of the above. Thus, the Applicants will not address such statements at the present time. However, the Applicants expressly reserve the right to challenge such statements in the future should the need arise (e.g., if such statement should become relevant by appearing in a rejection of any current or future claim).

It is submitted that the present application is in condition for allowance. Applicants respectfully request reconsideration of the pending claims and a finding of their allowability. A notice to this effect is respectfully requested. If the Examiner has any questions or the Applicant can be of any assistance, the Examiner is invited and encouraged to contact the Applicant at the number below.

The Commissioner is authorized to charge any necessary fees or credit any overpayment to the Deposit Account of GTC, Account No. 070845.

Dated: June 30, 2008

Respectfully submitted,

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